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## DEFINITIONS AND METHODOLOGICAL PRINCIPLES IN THEORY OF KNOWLEDGE.

**I**N the following article, I propose to suggest some definitions resulting from the analysis of experience suggested in previous articles, and some methodological precepts which I believe to be useful in the later portions of theory of knowledge. It was scarcely possible to state either the definitions or the precepts until we had decided that the relation of acquaintance is fundamental to experience, for almost all definitions and principles that we can adopt will presuppose this theory.

*Subjects* have been already defined in a previous article as entities which are acquainted with something, and *objects* as entities with which something is acquainted. In other words, subjects are the domain, and objects are the converse domain, of the relation *acquaintance*. It is not necessary to assume that acquaintance is unanalyzable, or that subjects must be simple; it may be found that a further analysis of both is possible. But I have no analysis to suggest, and therefore formally both will appear as if they were simple, though nothing will be falsified if they are found to be not simple.

*Cognitive facts* will be defined as facts involving acquaintance or some relation which presupposes acquaintance.

It is to be observed that we can define cognitive *facts*, not mental *particulars*, since we have no reason to assume

that subjects are in fact always or ever of a different kind from other particulars. The distinguishing mark of what is mental, or at any rate of what is cognitive, is not to be found in the particulars involved, but only in the nature of the relations between them. Of these relations acquaintance appears to be the most comprehensive and therefore the most suitable for the definition of cognitive facts.

There is, however, a certain difficulty in defining the word "presuppose" which occurs in the above definition. What is intended is to include such relations as (e. g.) attention and judgment, which seem plainly to involve acquaintance with the object attended to or the objects entering into the judgment. But it is not intended to include relations which merely *happen*, as an empirical fact, to occur only where there is acquaintance. In the cases which it is intended to include, the fact that acquaintance is involved seems *a priori* evident, and not merely a statistical occurrence. I do not know what, precisely, is the logical difference between these two kinds of connection, but it seems plain that there is a difference. The kind of connection intended in the definition is what we may call the *a priori* kind; and since the difficulties of the distinction belong solely to logic, we need not investigate them further at present.

*Theory of knowledge*, or *epistemology*, is more difficult to define. To begin with, no definition can be satisfactory which introduces the word "knowledge," both because this word is highly ambiguous, and because every one of its possible meanings can only be made clear after much epistemological discussion. Then again, difficulties arise as regards the relations of epistemology to psychology and to logic respectively. It is obvious that much of epistemology is included in psychology. The analysis of experience, the distinctions between sensation, imagination, memory, attention, etc., the nature of belief or judgment, in

short all the analytic portion of the subject, in so far as it does not introduce the distinction between truth and falsehood, must, I think, be regarded as strictly part of psychology. On the other hand, the distinction between truth and falsehood, which is plainly relevant to the theory of *knowledge*, would seem to belong to logic, though this is open to some degree of doubt. And in any case, as soon as we reach the theory of judgment, even apart from truth and falsehood, the difficulties encountered are almost entirely logical, and logical discoveries are what are most required for the progress of the subject. It can be shown<sup>1</sup> that a judgment, and generally all thought whose expression involves *propositions*, must be a fact of a different logical form from any of the series: subject-predicate facts, dual relations, triple relations, etc. In this way, a difficult and interesting problem of pure logic arises, namely the problem of enlarging the inventory of logical forms so as to include forms appropriate to the facts of epistemology. It would seem, therefore, that it is impossible to assign to the theory of knowledge a province distinct from that of logic and psychology. Any attempt to mark out such a province must, I believe, be artificial and therefore harmful.

The central problem of epistemology is the problem of distinguishing between true and false beliefs, and of finding, in as many regions as possible, criteria of true belief within those regions. This problem takes us, through the analysis of belief and its presuppositions, into psychology and the enumeration of cognitive relations, while it takes us into logic through the distinction of truth and falsehood, which is irrelevant in a merely psychological discussion of belief. We may define epistemology in terms of this problem, as: *The analysis of true and false belief and their presuppositions, together with the search for criteria of true*

<sup>1</sup> As I have come to know through unpublished work of my friend Mr. Ludwig Wittgenstein.

*belief*. But *practically* this definition is somewhat wide, since it will include parts of psychology and logic whose importance is not mainly epistemological; and for this reason, the definition must not be interpreted quite strictly.

*Data* are by no means easy to define, since there are various logically different kinds of data. The simplest kind will be *objects*: in this sense, a given person's data are those *particulars* with which he is acquainted. Even in this very narrow sense, there are, as I shall try to show in subsequent articles, still at least three ways in which data may be given, namely in sense, in memory, or in imagination; but these different ways of being given do not involve corresponding differences in the objects given. On the other hand, we can understand universals, and any primitive understanding of a universal (i. e., any understanding not derived from some other understanding) is in a sense a case of acquaintance, and is certainly sufficient ground for calling the universal in question a datum. What is the correct analysis of the understanding of universals is a difficult question, but such understanding must certainly be included among the data of knowledge. Again, *perceptions of facts* (as opposed to the corresponding judgments) must be included among data; if I see that one thing is to the left of another, or if I observe that the thunder is later than the lightning in a particular case, these perceived facts are certainly among my data. And perceived facts are not always thus particular: general logical facts, for example, are often such as can be perceived. I do not know whether any *judgments* (as opposed to perceptions) are to be included among the data of knowledge: arguments may be adduced on either side in this question. But certainly all epistemologically legitimate inference demands that both the premise and the connection of premise and conclusion should be data, either for perception or for judgment.

I think we may say broadly that *data* include all particulars, universals, and facts, which are cognized otherwise than by inference or by belief not derived from analysis of a perceived fact. Thus the only cognitions which do not give data are (*a*) beliefs obtained by inference, and (*b*) beliefs not obtained either by inference or by analysis of perceived facts. Beliefs of the second kind might be fitly called *prejudices*: it will be a mere accident whether they are true or false. Inferred beliefs, on the other hand, if derived from data and not from prejudices, will be true. But in these remarks we are anticipating the outcome of lengthy discussions which cannot be undertaken at present.

There is another, somewhat vaguer, sense in which the word "data" may be used in epistemology. If we are analyzing some body of knowledge, say physics, with a view to disentangling its truth and falsehood, we may give the name "data" to all the beliefs which we entertain when we enter on the inquiry. In this sense, "data" will be opposed to "premises," and what we have hitherto called data will be more fitly called premises. This usage is convenient in some discussions, but for our present purposes it seems not desirable.

It is a common error to suppose that it must be obvious what are our data in any subject-matter to which we turn our attention. This need by no means be the case, since something may quite well be a datum without the fact of its being a datum being also a datum. There is therefore nothing surprising in the fact that it is often very difficult to discover what our data really are.

I pass now to some methodological principles which may be useful in our subsequent inquiries.

1. *The objects of acquaintance cannot be "illusory" or "unreal."* It is customary to speak of dreams and hallucinations as illusory, and to regard images as unreal in some sense not applicable to the objects of normal sensa-

tions. No doubt there are important differences between the objects commonly considered "real" and the objects commonly considered "unreal." But for purely logical reasons, these differences demand some entirely different analysis. If an object is given in acquaintance, then that object has a certain relation to the subject which is acquainted with it. But this would be meaningless if there were no such object. An object of acquaintance is an object to which it is possible to give a proper name, as opposed to a description; it may become the "this" of attention. Of such an object, it is meaningless to suppose it unreal. A proper name which names nothing is not a proper name, but a meaningless noise. An acquaintance which is acquainted with nothing is not an acquaintance, but a mere absurdity. The conception "unreal" is not applicable to such immediate data, but only to *described* entities. We may say "the present king of France is unreal," meaning that there is no present king of France, but not meaning "there is an entity which is at present king of France and which is unreal." Unreality, in fact, is a notion which owes its origin to grammatical forms. These forms make it possible for the grammatical subject of a sentence to be a description, which is not the name of any constituent of the proposition expressed by the sentence. In such a case, if the description applies to nothing, we may say that the subject is unreal; and if we fail to realize that the unreal subject is merely grammatical, we may come to think that there are entities which are unreal. This, however, is a plain absurdity: given an entity, it is absurd to inquire whether it is real or unreal: there the entity is, and there is no more to be said. Thus the supposition that some objects with which we are acquainted are unreal is one which logic shows to be untenable.

The conclusion that no object of acquaintance can be "unreal" forces upon us a certain attitude of respect

towards dreams, hallucinations, and images. There are, of course, important epistemological differences between such objects and the objects of normal sensation, but these differences belong to a much later and more complex part of the subject. Their *likeness* to the objects of normal sensation is much less realized, but is far more important for our present purpose. Mankind has gradually selected a kind of aristocracy among entities, which it calls the "real" world. But, as Parmenides told Socrates, in philosophy we must not despise even the meanest things; and the entities which mankind has condemned as "unreal" are full of interest and importance. It will be said: "No doubt the things we see in dreams exist in a sense, but it is a purely subjective sense: they exist only because we are dreaming, and are merely parts of our mind." This may or may not be true. I am not concerned at present with the question whether it is true or false. I wish merely to point out the great complexity of what is asserted, and the immense system of knowledge which it presupposes. It is asserted that the objects of dreams exist only because we are dreaming; this means, I suppose, that there is some essential impossibility in such objects existing except when some subject is aware of them. It is asserted that they exist only in our mind; this means, I suppose, that not more than one subject can possibly be aware of them. But to know all this is to have an enormous knowledge of the external world, and to see that it cannot harbor anywhere such objects as I saw in my dream. And there is always the fear that the same proposition might be maintained regarding the things seen in waking life. If dreams are to be given a lower status than waking life, as a source of knowledge concerning the external world, this must be done, not by condemning them *ab initio*, but by showing that the world which is constructed on the assumption that they and waking life have exactly the same *immediate*



reality is one in which dream-objects are less intimately related to *other* entities than are the objects of our waking sensations. In fact, what is *called* the unreality of an immediate object must always be really the unreality of some other object inferred from the immediate object and described by reference to it. This conclusion, we shall find, is of great importance in all problems concerning our knowledge of the external world.

2. *The possibility of error in any cognitive occurrence shows that the occurrence is not an instance of a dual relation.* This maxim is closely connected with our first maxim, and equally has a purely logical origin. We saw that when we are acquainted with an object, there certainly is such an object, and the possibility of error is logically excluded. Exactly the same argument would apply to any two-term relation. But when the occurrence is one which unites the subject with several objects in a single fact, the situation is different. In this case, the several objects may or may not be themselves the constituents of a certain related fact; thus a certain described fact, namely the fact composed, in some specified manner, of the objects of the occurrence in question, may occur in certain cases and not in others. The further explanation and exemplification of this maxim will come better in the account of belief. For the present, its chief importance is negative: where error is possible, something not acquaintance or attention or any other two-term relation is involved. This applies, for instance, to the case of memory, in so far as memory is fallible.

3. *The epistemological order of deduction involves both logical and psychological considerations.* It is obvious that any order of valid deduction must involve *logical* considerations, since the propositions deduced must follow logically from their premises. But given a certain body of propositions of which some are deducible from others, there will be many ways of selecting some among them as

the premises from which the others are to be inferred. Any such set of premises may be called a set of *logical premises* for that body of propositions. In a purely logical problem, in which we do not consider the question whether any of the body of propositions are *known to be true*, conditions of elegance suggest that a set of logical premises should be such that no one follows from the others, and should consist of the smallest possible number of the simplest possible propositions. In epistemology, however, our premises have to fulfil other requisites. We are concerned not merely with truth, but with knowledge; hence our premises should be such as can be known to be true without being deduced from any others of the body of propositions in question. For this reason, a certain artificial naïveté is required in beginning epistemology: we must avoid assuming many things which we firmly believe to be true, but which can only be reached by a process of inference. On the other hand, in order to minimize the risk of error, which always exists in regard to premises, it is wise to include whatever appears to be known without proof, even if it could be deduced from other propositions so known. Thus the set of *epistemological premises* for any body of propositions consists of all those relevant propositions which appear to be known otherwise than by inference, and from which the given body of propositions can be deduced. If some of the epistemological premises can be deduced from others, that tends to confirm our belief in the premises, and does not afford a reason for excluding those that can be deduced. We may call a body of propositions *epistemologically self-contained* when it contains all its own epistemological premises. The propositions constituting our epistemology must, of course, be epistemologically self-contained—except that some of its premises belong to logic; but those that belong to logic ought to be stated. Since the question as to what appears to be known without

inference involves psychology, the epistemological order is partly determined by psychological considerations. The real business of epistemology is largely the discovery of its own epistemological premises; the deductions from them will of course proceed according to the rules of logic, and may therefore be left to the logician.

4. *A knowledge of physics and physiology must not be assumed in theory of knowledge.* This maxim follows from the preceding account of the epistemological order. Physics and physiology belong to our knowledge of what is called the external world; our knowledge of them is obviously dependent upon sensation, and is obtained by methods which the theory of knowledge must investigate. Thus however firmly we may be convinced of the truth of physics and physiology, we must only use this conviction as a means of *testing* our epistemology, not as affording premises upon which our epistemology may build from the start. To take a crude illustration: if we are considering whether or how the sense of sight gives knowledge of physical objects, we must not assume that we know all about the retina, for the retina is a physical object of which we obtain knowledge by seeing it. Thus to assume that we know this or that about the retina is to assume that we have already solved the epistemological problem of the physical knowledge to be derived through sight.

It is to be observed, however, that it would not be a logical fallacy to assume knowledge of the organs of sense for a purely sceptical purpose, i. e., in order to show that no knowledge of physical objects is to be derived from the senses. If it could be shown that the hypothesis that we obtain such knowledge through the senses leads to a theory of the sense-organs which shows that they cannot give such knowledge, then the hypothesis with which we started would have refuted itself, and would therefore be false. But although some such position is sometimes advanced,

and is not *logically* unsound, it is hardly possible that it should be true in substance. The hypothesis that we obtain knowledge of physical objects through the senses is one which is capable of a multitude of forms, according to the view we adopt as to the nature of physical objects. If one view on this point is self-refuting, another may not be, and we can never be sure that we have tried all possible views. Thus a dogmatic scepticism as to the knowledge of physical objects derived from the senses can never be warranted by such arguments as we have been considering. Nevertheless, the possibility is one which it is important to remember, since it affords a test to which any theory as to our knowledge of the external world may be submitted.

It is no doubt the case that our sensations are functions of the sense-organs and the nervous system, but this is not the *primitive* knowledge—it is a scientific inference, and cannot form part of the epistemological premises of epistemology. In epistemology, it is important to reduce our problems to what is actually experienced. Take, for example, such a simple fact as that we no longer see objects when we shut our eyes. A number of immediate experiences have to be combined in order to reach this result. We can know from our own experience that visual objects disappear when we have certain muscular and tactile sensations, which we learn to locate in our eyelids. By shutting one eye in front of a looking-glass we may learn (assuming what we know of looking-glasses) what is the visual appearance of the eyelid when we have the muscular sensation in question. By seeing others shut their eyes, and learning that then they no longer see, we can learn without looking-glasses what shutting the eyes looks like. But all this is a complicated process, learned, no doubt, at an early age, but not known without learning. Thus the dependence of sight upon the eyes is not the sort of thing to be *assumed* in epistemology. And what is true of this

very simple physiological fact is true *a fortiori* of the complicated and difficult knowledge concerning the brain which is sometimes thought relevant to the foundations of epistemology. All such knowledge is excluded by the rule which must guide us throughout our investigation: Seek always for what is obvious, and accept nothing else except as the result of an inference from something obvious which has been found previously. With this rule, a great simplification is effected, and vast masses of erudition can be swept aside as irrelevant.

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